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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,705	11/21/2003	Vadim Sheinin	YOR920030561US1 (17147)	2960
23389 7590 03/03/2009 SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530				
EXAMINER BLOOM, NATHAN J				
ART UNIT		PAPER NUMBER		
2624				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/719,705

**Applicant(s)**

SHEININ, VADIM

**Examiner**

NATHAN BLOOM

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9,11-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicants' response to the last Office Action, filed on December 10<sup>th</sup>, 2008 has been entered and made of record.

#### ***Response to Arguments***

1. Applicant's arguments and amendments, see the remarks and amendments, filed 12/10/2008 that discuss the newly amended claims (addition of the phrase "only"), with respect to the rejection of claims 1, 3-9, 11-17, and 19-23 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of the teachings of Nishida et al. (US 4803735).
2. Additionally, Applicant's argument with respect to the teachings of Pittel and Schiller on pages 8-9 of the filed remarks were considered, and found to be non-persuasive. In particular, Applicant argued on page 8 that "event though Schiller states that use of additional pen tilt data increases accuracy, Schiller provides no teaching as to how that can be performed.". Examiner agrees that Schiller does not explicitly detail this information, but no further detail other than the use of the title angle (taught by Schiller) is required by the currently presented claim language. Regardless, the teachings of the prior art rely upon the knowledge of ordinary skill in the art at the time of the invention in utilization of well known aspects of the invention.
3. Applicant has argued that the teachings of Pittel require active light sources, that Pittel has not taught the use of a touch sensitive writing surface, and that the device of Pittel is not

combinable with a PDA device. However, as per the previous office action: Pittel has taught the use of both (exclusively) passive and active markers, and Pittel is only being relied upon for the teaching of a camera mounted on a PDA for measuring the tilt angle of a stylus.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-9, 11-17, and 19-23 are rejected under 35 U.S.C. 103(a) as being, unpatentable over Schiller (US 2002/0031243), in view of Pittel (US 2003/0095708), and in further view of Nishida et al. (US 4803735).

Instant claim 1: A dynamic handwriting recognition system for a pervasive device comprising:

a touch screen device [*Schiller paragraphs 0032-0035 teaches the use of a touch screen device (digitizing pad) on a PDA*];

a non-electronic, passive stylus means having no light source, enabling a user to write on said touch screen, said touch screen generating dynamic information associated with stylus writing [*Schiller teaches the use of the touch screen to generate dynamic handwriting information in combination with a stylus means is inherent for a touch screen device such as is described for use in Schiller which requires the generation of a signature.*];

a digital image capture means mounted in said pervasive device for obtaining images of said non-electronic stylus as said user writes on said touch screen; [*See below.*]

means for processing said obtaining images and extracting non screen-related information associated with non-electronic, passive stylus manipulation by said user, wherein said extracted non screen related information include tilt parameters associated with said non-electronic, passive stylus manipulation, said tilt parameters including a title angle determined by only two points in three-dimensional space; and [Schiller teaches the use of handwriting information generated by the touchpad in combination with non touchpad information in paragraph 0060 (tilt information) to increase the accuracy of the recognition. However, Schiller does not teach the measuring or processing of this data with an attached camera device. However, Pittel: Teaches in Fig. 1-2, 7-8, 11, paragraphs 0003, 0004 (tilt of pen relative to writing surface), 0026, the use of a digital camera on a mobile device (such as a PDA see beginning of paragraphs 0004 and 0026) to perform handwriting recognition. Also, in paragraph 0004 Pittel teaches the measurement of the tilt of the writing element, which is known as taught by Schiller to increase the accuracy of the handwriting recognition. Thus it would have been obvious to one of ordinary skill in the art to combine the teaching of Schiller with Pittel to substitute the pen based tilt measurement referred to in Schiller with a known camera based technique as taught by Pittel to yield the predictable result of determining the handwriting using touch-pad and tilt information. Furthermore, Pittel teaches in paragraph 0022 that a camera provides a real time approach and an increased signal to noise ratio thus providing up to date accurate readings, and in paragraph 0028 states that the pen can be electronic or non-electronic and thus Pittel teaches the use of a passive (reflectors or color markings). In particular, Schiller in view of Pittel has taught the detection of three points on the pen in order to determine the tilt of the pen. However, the detection of the orientation of an object based on the location of two points was

*well known to one of ordinary skill in the art as has been evidenced by the teachings of Nishida in column 2 lines 3-15. It would have been obvious to one of ordinary skill in the art to modify the three point object orientation of Schiller in view of Pittel with the two point object orientation of Nishida to reduce the number of required reference points. Furthermore, one of ordinary skill in the art at the time of the invention would have had a reasonable expectation for success in modifying the three point method of Pittel with the two point method (determining line between two reference points, and the angle of the line) of object orientation determination of Nishida.]*

handwriting recognition means receiving both said dynamic touch screen information and extracted non touch screen-related information from said processed images for recognizing writing of said user, wherein improved handwriting recognition is achieved [*See the rejection above. Schiller teaches the utilization of touch-pad handwriting recognition information as well as tilt information. Pittel teaches the measuring of tilt information using an alternative method (camera).].*

Instant claim 3: The dynamic handwriting recognition system as claimed in claim 1, wherein said pervasive device comprises a Personal Digital Assistant (PDA) device [*Pittel discloses the use of the camera on a portable electronic device in paragraph 0004 and Schiller in paragraph 0035 teaches a PDA.].*

Instant claim 4: The dynamic handwriting recognition system as claimed in claim 1, further including a touch screen control device for generating coordinates of said non-electronic, passive stylus writing upon said touch screen [*The generation of coordinates is an inherent part of*

*handwriting recognition on a touch screen display. Furthermore, see paragraph 0060 of Schiller wherein the x,y vector data is used, and one of ordinary skill in the art understands that vectors have a direction, magnitude, and coordinate positions.]*

Instant claim 5: The dynamic handwriting recognition system as claimed in claim 1, wherein said digital image capture means obtains images in a plane perpendicular to a plane defined by said touch screen device [*Pittel Fig.1 and 2*].

Instant claim 6: The dynamic handwriting recognition system as claimed in claim 4, wherein said pervasive device implements pattern recognition means for extracting said non touch screen-related pen information [*Pittel: paragraph 0004 "The software is configured to apply pattern recognition to signals from the digital cameras"*].

Instant claim 7: The dynamic handwriting recognition system as claimed in claim 6, wherein said non-electronic, passive stylus means includes elements enabling recognition by said pattern recognition means [*Pittel: Fig 7 paragraph 0065 "The black (or other colored) tip of the marker would then be automatically tracked by the same phone and camera". Furthermore, it has been known to one of ordinary skill in the art to track an object based on its own properties or a particular pattern (i.e. pattern recognition) placed on the object.*].

Instant claim 8: The dynamic handwriting recognition system as claimed in claim 7, wherein said elements enabling pattern recognition includes colored segments in a structure known to said pattern recognition means [*Pittel: As per rejection of instant claim 8 the tip can be black or colored hence distinguishing it from the lighter colored writing surface by the different color segments.*].

Claims 9 and 11-16 describe the method performed by the system of claims 1-8, and as per rejection of claims 1 and 3-8 the system has been shown to be within the knowledge of “one of ordinary skill in the art”. Furthermore, since the system performs the described method then the method was also known to one of ordinary skill in the art at the time of the invention.

Instant claims 17-20: The limitations of instant claims 17-20 are encompassed by the limitations of instant claims 1-2 and 4-5. Thus instant claims 17-20 are rejected as per the rejections of instant claims 1-2 and 4-5.

Instant claims 21-23: The limitations of instant claims 21-23 are encompassed by the limitations of instant claims 6-8. Thus instant claims 21-23 are rejected as per the rejections of instant claims 6-8.

### ***Conclusion***



6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Bloom whose telephone number is 571-272-9321. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Matthew C Bella/

Supervisory Patent Examiner, Art Unit 2624